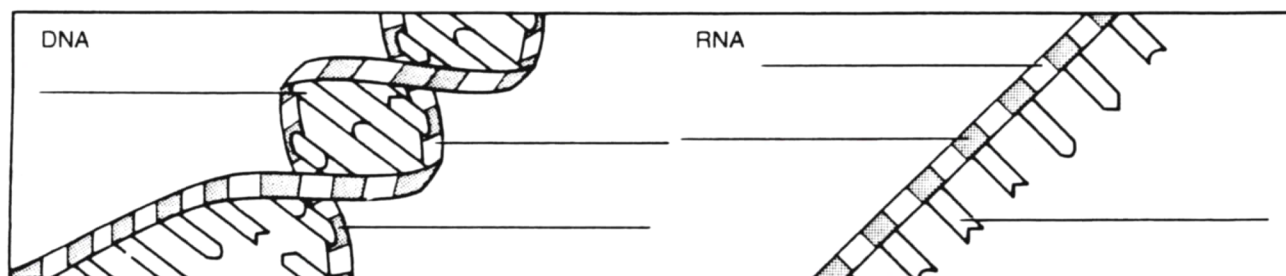


B. STRUCTURE OF DNA AND RNA

Textbook reference: Sections 7-3, 7-6, 7-7

Deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) are two of the cell's most important molecules. These nucleic acids have a complex three-dimensional structure that enables them to direct protein synthesis in the cell. Study the structures of the DNA and RNA molecules illustrated below. Fill in the missing labels. Then complete the chart and answer the questions.



Name	Sugar	Bases	Number of Nucleotide Strands
DNA			
RNA			

- The two DNA strands twist around each other. This is called a _____.
- The repeating units of _____ and _____ make the backbone of DNA and RNA.
- In a DNA molecule, the nitrogen bases of one strand attach to the nitrogen bases of the other. This is called _____. The bases are held together by bonds of _____.
- A strand of DNA contains the following bases: ATCGACT. What will be the bases on the complementary DNA strand? _____ On the complementary RNA strand? _____
- Part of the DNA molecule shown above is starting to unwind. What two cellular activities could this be the start of? _____